PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RL.P52856WO		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)					
International application No. PCT/EP2003/050618	International filing date (day/month/year) 11.09.2003	Priority date (day/month/year) 11.09.2003					
International Patent Classification (IPC) or H04B7/26	both national classification and IPC						
Applicant TELEFONAKTIEBOLAGET LM E	RICSSON (PUBL)						
	amination report has been prepared by this e applicant according to Article 36.	s International Preliminary Examining					
2. This REPORT consists of a total	of 5 sheets, including this cover sheet.						
This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of sheets.							
3. This report contains indications	coloting to the following items:						
I 🖾 Basis of the opinion	elating to the following terms.						
II Priority							
IIINon-establishment o	f opinion with regard to novelty, inventive s	step and industrial applicability					
IV Lack of unity of inver	tion						
	under Rule 66.2(a)(ii) with regard to novel tions supporting such statement	lty, inventive step or industrial applicability;					
VI Certain documents of	••						
VII Certain defects in the	international application						
VIII Certain observations	on the international application						
Date of submission of the demand	Date of completion	n of this report					
11.07.2005	31.08.2005						
Name and mailing address of the internation preliminary examining authority:	nal Authorized Officer	nuclass Potentiage.					
European Patent Office - P.I NL-2280 HV Rijswijk - Pays		· · · · · · · · · · · · · · · · · · ·					
Tel. +31 70 340 - 2040 Tx: 3		1 70 340-4107					



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/050618

I. Basis	of the	report
----------	--------	--------

1. With regard to the **elements** of the international application (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)):

	Des	cription, Pages					
	1-8		as originally filed				
	Clai	ms, Numbers					
	1-14	1	as originally filed				
	Dra	wings, Sheets					
	1/2,	2/2	as originally filed				
2.	With regard to the language , all the elements marked above were available or furnished to this Authority in language in which the international application was filed, unless otherwise indicated under this item.						
	The	These elements were available or furnished to this Authority in the following language: , which is:					
		the language of a tra	inslation furnished for the purposes of the international search (under Rule 23.1(b)).				
		the language of publ	ication of the international application (under Rule 48.3(b)).				
With regard to any nucleotide and/or amino acid sequence disclosed in the international applicati international preliminary examination was carried out on the basis of the sequence listing:							
		contained in the inte	rnational application in written form.				
		filed together with the	e international application in computer readable form.				
		furnished subsequer	ntly to this Authority in written form.				
		furnished subsequer	ntly to this Authority in computer readable form.				
		The statement that to in the international a	he subsequently furnished written sequence listing does not go beyond the disclosure pplication as filed has been furnished.				
		The statement that the listing has been furn	he information recorded in computer readable form is identical to the written sequence ished.				
4.	The	amendments have re	esulted in the cancellation of:				
		the description,	pages:				
		the claims,	Nos.:				
		the drawings,	sheets:				

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

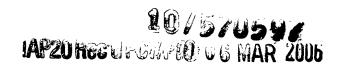
PCT/EP2003/050618

5.		This report has been establish been considered to go beyond	t has been established as if (some of) the amendments had not been made, since they have sidered to go beyond the disclosure as filed (Rule 70.2(c)).				
		(Any replacement sheet conta report.)	ining s	uch amendi	ments must be referred to under item 1 and annexed to this		
6.	. Additional observations, if necessary:						
٧.	 V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement 						
1.	Sta	tement					
	Nov	velty (N)	Yes: No:	Claims Claims	1-14		
	Inv	entive step (IS)	Yes: No:	Claims Claims	1-14		
	الم عدا	tiial amaliaabilib. (IA)	Voc:	Claims	1_14		

No: Claims

2. Citations and explanations

see separate sheet



INTERNATIONAL PRELIMINARY International application No. PCT/EP2003/050618 EXAMINATION REPORT - SEPARATE SHEET

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1: EP-A-1 286 491 (MATSUSHITA ELECTRIC IND CO LTD) 26 February 2003 (2003-02-26)

1 The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document):

A method for aligning transmission time intervals of physical channels in the uplink and downlink directions of a bidirectional radio communication system (fig. 6)

The subject-matter of claim 1 differs from this known in that

- The response processing delay is measured or estimated at a user terminal
- Depending on this measurement or estimate Transmission Time Intervals of an uplink physical channel are delayed with respect to the corresponding downlink physical channels

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as minimizing Round Trip Delay (RTD).

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

In D1 response processing delay is not measured or estimated but user terminal has at its disposal <u>predetermined</u> multiple time instances (sub TTI, as defined in D1) to send uplink data (ACK/NACK) according to its own signal processing capabilities and used modulation type. Slower user terminal will send uplink data after a longer delay compared to faster user terminal, but no measurement or estimation of actual

- response processing delay is involved or suggested. Applicant's solution permits a further refinement of the Round Trip Delay when compared to D1.
- The same reasoning applies, mutatis mutandis, to the other corresponding independent claims that, therefore, also meet the requirements of the PCT with respect to novelty and inventive step.
- 3 Claims 2-10,12 are dependent on claim 1 and 11 respectively and as such also meet the requirements of the PCT with respect to novelty and inventive step.